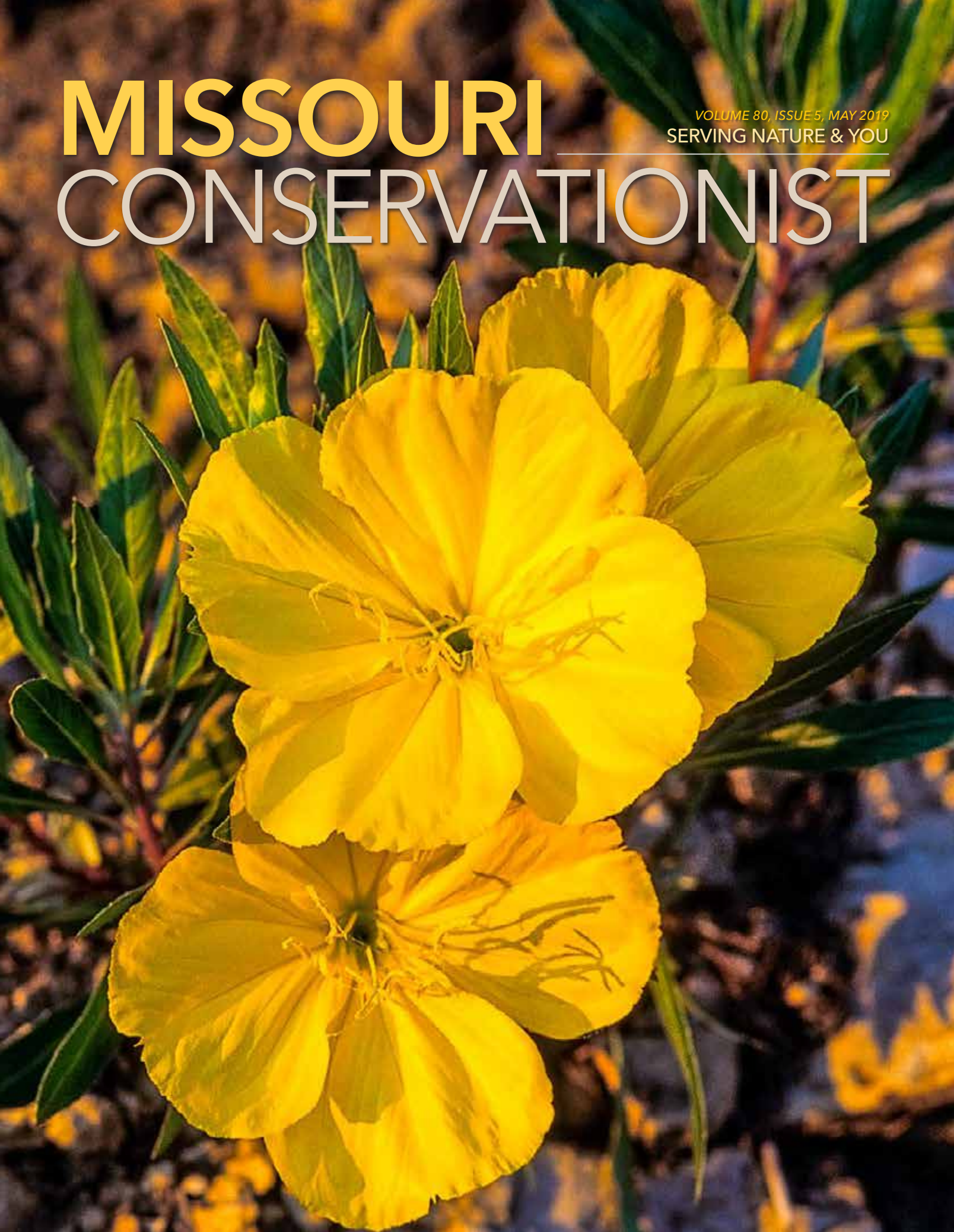
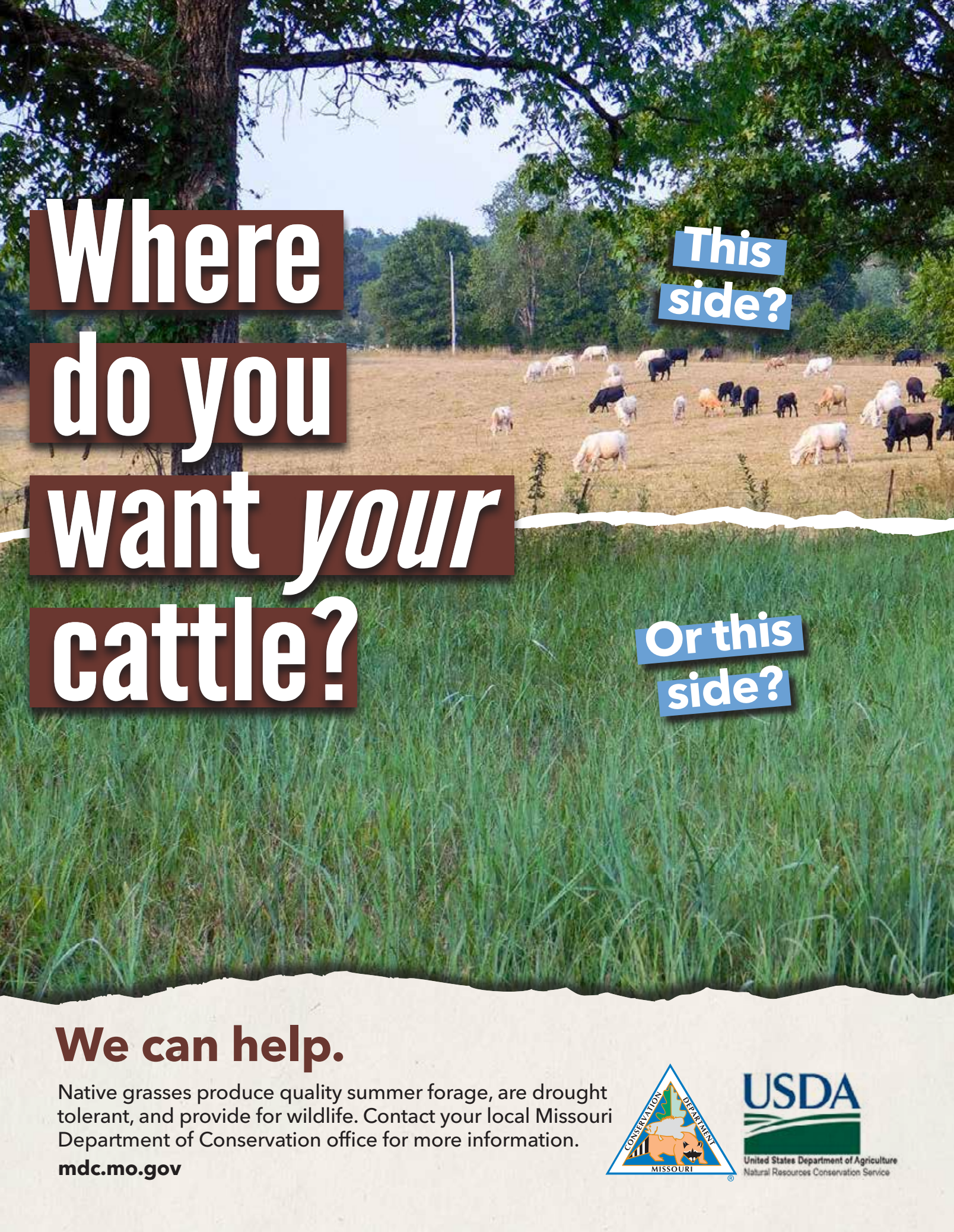


MISSOURI CONSERVATIONIST

VOLUME 80, ISSUE 5, MAY 2019
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Baby
raccoon



MISSOURI CONSERVATIONIST



ON THE COVER

Missouri evening primrose blooms May through August.

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DESIGNERS

Les Fortenberry, Marci Porter

PHOTOGRAPHERS

Noppadol Paothong, David Stonner

CIRCULATION MANAGER

Laura Scheuler

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MISSOURI
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A BRIGHT SPOT

Thanks for such a great magazine. It's very informative and is one of the highlights of my day when I get it.

Camen B. Rhoads
via email

ENJOYING THE JOURNEY

I thoroughly enjoy the *Missouri Conservationist*. The photos by David Stonner and Noppadol Paothong are terrific. I always enjoy and am enlightened by the articles. The article about Henry Rowe Schoolcraft [*Schoolcraft: A Journey Through Southern Missouri*, February, Page 10] was particularly special for me — Henry Rowe Schoolcraft is my great, great, great grandpa.

Paul Usher via email

Special thanks for the article in the February 2019 issue of the *Conservationist* about Henry Schoolcraft's exploration of the Ozarks. Since moving to the area in the early 1980s, I have been interested in his expedition. To think that it was frontier country only 100 years ago.

I am currently finishing a journal about my 30-year observations and illustrations of the wildflowers in my part of southwestern Missouri. Schoolcraft's observations of the plant life were an inspiration to me. I hope my journal will not only be a joy to readers but also a benefit to the wildflowers themselves.

Ginny Campbell Branson West

BLUEBIRDS

I have read the *Missouri Conservationist* for over 60 years and always look forward to getting it in the mail.

Noppadol Paothong is an excellent photographer. His shot of the bluebird on the cover of the December 2018 issue is great and it inspired me to write about my experiences raising bluebirds.

The first year, I put up seven handmade bird boxes on wooden fence posts, but a raccoon destroyed one of them and a cat got the birds out of another box. I still ended up fledging 26 birds. The next year, I decided to place the boxes on PVC pipes

since cats, raccoons, and snakes cannot climb the slick surface. I put up 25 boxes and raised 90 babies. I now have a total of 75 bluebird houses and haven't lost a single baby to predators since that first year.

I have fledged 1,192 bluebirds to date. I check the boxes weekly (weather permitting) and record the results.

I also raise a lot of melons and catch a lot of fish from my boat. I am 80 and hope to continue these activities for several more years.

Jim Schmitz Maywood

LANDOWNER PERMITS

I received a survey about landowner permits for deer hunting. I said everyone should have to pay. The money goes to the Conservation Department and the phenomenal job they do.

When the program was implemented, it was in hopes that landowners would manage their land to help increase the overall deer herd. Between that and the great work by MDC, the herd is very large and healthy. When I started hunting deer in the late 70s, if someone bagged a deer, it was a big deal. Doe tags were nearly nonexistent.

Fast forward to today. Today's deer hunting is light-years different. The days of asking permission to hunt for the nonlandowner are over. Farmers, landowners, and many companies who lease properties have learned the value of deer hunting and are charging for the right to hunt. I totally support their right to make additional income on their property. I personally have leased land for 20 years and have been happy with the arrangement.

My point is if everyone is making money off deer hunting then MDC should be first in line. The price of a permit is small and the good MDC does is worth it. Go to Bennett Springs, Lake LaBelle, or Busch Wildlife. You will see money well spent.

Daniel G. Hruby Maryland Heights

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Conservation Headquarters

573-751-4115 | PO Box 180, Jefferson City, MO 65102-0180

Regional Offices

Southeast/Cape Girardeau: 573-290-5730

Central/Columbia: 573-815-7900

Kansas City: 816-622-0900

Northeast/Kirksville: 660-785-2420

Southwest/Springfield: 417-895-6880

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on your Instagram photos.



1

1 | Female
five-lined skink
with eggs by
[wild.reptiles](#), via
Instagram

2 | American lady
butterfly on glade
coneflower by
[Mike Conley](#), via
Flickr



2

3 | Current River
sunset by [Wendy
Stewart](#), via email



3

MISSOURI CONSERVATION COMMISSIONERS



Don
Bedell



Marilynn
Bradford



David
Murphy



Barry
Orscheln



Up Front

with Sara Parker Pauley

✱ I was at a meeting a few weeks ago with other conservation directors from around the country when one of my east coast colleagues asked me about MDC's bear biologist. "You know the one you stole from us," he said. I grinned and said, "Laura (Conlee) is fantastic, and thanks again for training her!" Read more on Laura's bear research work on Page 10.

Such good-natured banter among directors is commonplace, but the amazing talent and expertise that is characteristic of MDC staff is anything but common. I find myself continuously in awe of the knowledge, skills, and passion MDC professionals demonstrate in their work for the citizens and the fish, forest, and wildlife resources. They inspire me.

Stories of MDC staff and their professionalism are abundant year-round, but with spring newly arrived, I think about the wildfire season and the skilled MDC employees that are ready to respond — to fight public land fires, to assist rural fire districts in their response efforts, and even to assist fire-fighting colleagues in other states. Our crews are mobilized with Iowa firefighters through the Missouri Iowa Coordination Center. Last year alone, six Missouri-Iowa crews headed west to fight fires, including the infamous California Carr and Stone fires.

I received an email from one MDC firefighter after he returned from the California fires with these words, "I am lucky to work for an agency that is filled with people that want to help others and make a difference." I feel the same, every single day.

Sara Parker Pauley

SARA PARKER PAULEY, DIRECTOR
SARA.PAULEY@MDC.MO.GOV

The *Missouri Conservationist* (ISSN 0026-6515) is the official monthly publication of the Missouri Department of Conservation, 2901 West Truman Boulevard, Jefferson City, MO (Mailing address: PO Box 180, Jefferson City, MO 65102.) **SUBSCRIPTIONS:** Visit mdc.mo.gov/conmag, or call 573-522-4115, ext. 3856 or 3249. Free to adult Missouri residents (one per household); out of state \$7 per year; out of country \$10 per year. Notification of address change must include both old and new address (send mailing label with the subscriber number on it) with 60-day notice. Preferred periodical postage paid at Jefferson City, Missouri, and at additional entry offices. **POSTMASTER:** Send correspondence to Circulation, PO Box 180, Jefferson City, MO 65102-0180. Phone: 573-522-4115, ext. 3856 or 3249. Copyright © 2019 by the Conservation Commission of the State of Missouri.

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mdc.mo.gov 3

Nature LAB

by Bonnie Chasteen

Each month, we highlight research MDC uses to improve fish, forest, and wildlife management.

FISHERIES MANAGEMENT

Niangua Darter Recovery

✳ The Niangua darter is small, only 4 inches long, but it plays a large role in the Niangua Watershed's ecosystem.

"It's been an indicator species for years," said Craig Fuller, an MDC fisheries management biologist and leader of the Niangua Darter Recovery Team.

The darter's decline indicated its habitat was also declining. In 1985, the U.S. Fish and Wildlife Service listed the darter as threatened, citing causes such as reservoir construction, general deterioration of stream habitat, and the introduction of nonnative fishes. In 2003, Fuller's team identified an additional cause: low-water road crossings found throughout the darter's range.

"These created barriers," Fuller said, "keeping fish and other aquatic organisms from accessing food, mates, and habitat."

In 2004, the team developed a solution that would improve the fish's chances of recovery and benefit the



Aquatic Resource Scientist Jacob Westhoff monitors Niangua darter populations in the Little Niangua River.

Replacing low-water crossings with bridges in the Niangua Watershed helps restore threatened fish

people living, working, and recreating in the Niangua Watershed.

They worked with county and state highway departments as well as private engineers to design better crossings that would allow for the fish's passage and provide safer bridges for the public.

The team started with the Little Niangua River, replacing 10 road crossings that created barriers. The team completed the first replacement in 2004 and the last in 2013. As a result, they reconnected more than 55 miles of stream habitat.

Next, the team moved into the entire Niangua Watershed, replacing five more low-water crossings. By the end of 2017, they had reconnected an additional 62 miles of Niangua Watershed stream habitat.

Niangua Watershed Bridges at a Glance

15

Number of bridges installed

117

Number of stream miles reconnected



Early Results

2015 monitoring on the Little Niangua River indicated darters were moving into reconnected habitat.

Project Partners

- ▶ Dallas, Hickory, and Camden county commissions
- ▶ Federal Emergency Management Agency
- ▶ Great River Associates
- ▶ Missouri Conservation Heritage Foundation
- ▶ Missouri Department of Conservation
- ▶ Missouri Department of Transportation
- ▶ U.S. Fish and Wildlife Service

In Brief

News and updates from MDC



LEAVE WILDLIFE WILD

DON'T TAKE WILDLIFE FROM THEIR NATURAL HABITAT

➔ Spring brings with it the birth of wild animals, such as birds, rabbits, deer, and squirrels. Kind-hearted people often want to adopt young animals they find because they think they have been orphaned or abandoned. Most times they have not.

"Young wild animals are rarely abandoned or orphaned," said MDC State Wildlife Veterinarian Sherri Russell. "The wildlife parent is afraid of people and will retreat when you approach. If the young animal is left alone, the parent will usually return. Also, parent animals

cannot constantly attend to their young and often spend many hours each day away from their young gathering food."

Russell added that bird chicks are common animals people want to help.

"If you see a bird chick on the ground and it has feathers, leave it alone. It is a fledgling and the parents are nearby keeping an eye on it," she explained. "If you find one that is featherless, it probably fell out of the nest. Return it to the nest if you can, or at least near the nest."

Another common problem is dogs catching rabbit kits and mowers running over nests.

"Wild rabbits seldom survive in captivity and actually can die of fright from being handled," Russell explained. "Even if they are injured, return young rabbits to the nest or the general nest area. The mother will most likely return."

She added most wild mothers do not abandon their young because of a human smell on them, and most young wild animals do not survive in captivity.

"While people may have good intentions, the care and rehabilitation of wild animals requires special training, knowledge, facilities, care — and permits," she said. "Wild animals, if they are to survive in captivity, often require highly specialized care. Without such care, they will remain in poor health and may eventually die. And it is illegal to possess many wild animals without a valid state or federal permit."

To learn more, visit short.mdc.mo.gov/ZNq.



MUSHROOM, FISHING BOOKLETS AVAILABLE

Enjoy Missouri's wild mushrooms safely with *A Guide to Missouri's Edible and Poisonous Mushrooms*. This new full-color, illustrated publication features 10 groups of edible mushrooms and five groups of poisonous mushrooms. Other topics include tips for a positive mushroom-hunting experience, how to make a spore print, and more. At 5½-by-8 inches and 48 pages, it's easy to carry and use in the field.

The new *Smallmouth Bass/Goggle-Eye Special Management Areas* booklet highlights valuable fishing information, special management areas, and regulations. This is a revision of the *Ozark Smallmouth Bass Fishing* map.

Both publications are free to Missouri residents. To order, email *A Guide to Missouri's Edible and Poisonous Mushrooms* or *Smallmouth Bass/Goggle-Eye Special Management Areas* and your shipping address to pubstaff@mdc.mo.gov or call 573-522-0108. The mushroom guide is also online at short.mdc.mo.gov/ZNf.

GET HOOKED ON FISHING

Want some free fun that gets family and friends outside in nature? Get hooked on fishing with our Free Fishing Days June 8 and 9. During Free Fishing Days, anyone may fish in the Show-Me State without buying a fishing permit, trout permit, or trout park daily tag.

Other fishing regulations remain in effect, such as limits on size and number of fish an angler may keep. Special permits may still be required at some county, city, or private fishing areas. Trespass laws remain in effect on private property.

Conservation makes Missouri a great place to fish, and Free Fishing Days encourages people to sample the state's abundant fishing opportunities. Missouri has more than a million acres of surface water, and most of it provides great fishing for the state's more than 1.1 million anglers. Missouri is home to more than 200 different fish species, with more than 20 of them being game fish.

For information on Missouri fishing regulations, fish identification, and more, get a copy of the *2019 Summary of Missouri Fishing Regulations*, available where permits are sold or online at short.mdc.mo.gov/Zq3.

Ask MDC

Got a Question for Ask MDC?

Send it to AskMDC@mdc.mo.gov or call 573-522-4115, ext. 3848.

Q: I found this unusual fungus in my woods last year. What is it?

➔ This "lobster mushroom" is actually a fungus that has parasitized a *Russula* or *Lactarius* mushroom species. Lobster mushrooms are hard to mistake — the entire host mushroom is covered with a bright orangish-red, moldlike fungus. It's a mushroom on a mushroom. The hard surface is dotted with fine pimples, each of which is a flasklike vessel in which the spores are produced. The parasite often entirely obscures the gills of the host mushroom. Eventually, it even begins to twist the shape of the host into strange contortions.

Even more curious, this parasitic fungus transforms ordinary nonedible *Russula* and *Lactarius* fungi into something delightful — excellent, edible, choice mushrooms. Look for them in the woods from July through October. When not completely up, they can be found by searching under bumps in the soil.



Lobster mushroom



Southern black haw

Q: Can you help me identify this shrub?

➔ A member of the honeysuckle family, this is southern black haw (*Viburnum rufidulum*). This irregularly branched shrub grows to approximately 18 feet, has dark green, glossy leaves, and flowers in April and May.

Some people call it "wild raisin" because the sweet and edible fruits — smooth, oval, and blueish-black in color — hang in drooping clusters by September. This species is also called "rusty black haw" because the young leaves, petioles, and twigs are covered in rusty-red hairs.

Viburnums form a minor, but important, segment of the diet of many birds and mammals. Cardinals, cedar waxwings, ruffed grouse, cottontail rabbits, chipmunks, and many more species eat the



Prairie lizard

fruits. White-tailed deer and beavers consume the twigs, bark, and leaves.

Although this shrub can be found in a handful of counties north of the Missouri River, it primarily occurs in rocky or dry woods and glades, rich, moist valleys, and fertile ground along streams in the southern half of the state.

Q: I spotted this tiny lizard east of Gentryville. Can you identify it for me?

➔ This specimen is a prairie lizard (*Sceloporus consobrinus*), a small, gray to brown, rough-scaled reptile

living mostly in the southern half of Missouri.

Females and males differ in appearance. Females have distinct wavy lines crossing their back; males have little to no pattern but develop iridescent blue patches on each side of their belly and throat.

Formerly called the "northern fence lizard," this species prefers rocky glades and forest edge habitats where fences are common. Excellent climbers, prairie lizards like to bask in the sun atop tree stumps, downed trees, rock piles, firewood stacks, and fences.



Mark Henry

DOUGLAS COUNTY
CONSERVATION AGENT

offers this month's

AGENT ADVICE

With more than 200 species of fish in more than a million acres of surface water, Missouri is a great place to fish. This month, there's another reason to celebrate Missouri fishing — black bass season. Beginning May 25, anglers can catch and keep smallmouth, largemouth, and spotted bass in streams south of the Missouri River. All bass must be at least 12 inches, and the daily limit is six. Some streams have more restrictive regulations so always check the *Wildlife Code*. If fishing in a group, keep your limit separate and identifiable. Purchase your fishing permit before heading out. For more information about black bass, visit huntfish.mdc.mo.gov/fishing. See you on the water!

What IS it?

Can you guess this month's natural wonder?

The answer is on
Page 9.



WE ARE CONSERVATION

Spotlight on
people and partners

24:1 Initiative

→ Twenty-four municipalities empowered by Beyond Housing, a comprehensive community-building nonprofit in the Normandy Schools Collaborative, share one vision for successful children, engaged families, and strong community. Part of their vision is healthy urban trees, which research shows create a sense of well-being.

They work hard at community conservation

Over the last two years, the 24:1 communities have kept their contracted urban forester, Doug Seely, plenty busy. "The 24:1 Initiative communities have received 24 Tree Resource Improvement and Maintenance grants. They've also offered chainsaw safety training, conducted many tree plantings, removed hazard trees, and pruned city trees throughout the service area," Seely said.

In their own words

"This program is a very important investment that will benefit cities, residents, and the environment for 50 years and more," said Pagedale Mayor Mary Louise Carter.

by **Cliff White**



From left:
James McGee,
mayor of the City
of Vinita Park;
Mary Carter,
mayor of the City
of Pagedale; and
Chris Krehmeyer,
president and
CEO of Beyond
Housing

What's **your** conservation superpower?



Three-toed box turtle

GIVE TURTLES A BRAKE

Turtles are struck by cars throughout warmer months, but they are at a greater risk this time of year. Spring rains and warmer weather encourage turtles to emerge from their burrows and search for food and mates, which sometimes leads them across roadways. Comfort is also a factor. Like other reptiles, turtles are cold-blooded, so basking on warm asphalt feels good on cool spring days.

Slow down when you see a turtle in the road and check to be sure you can safely steer around it. If helping a turtle cross a road, keep human safety as your number-one concern. Check for traffic and move the turtle across the road in the direction it is traveling.

And please leave wild turtles wild. Taking a wild turtle and keeping it as a pet usually ends in a slow death for the captive turtle.

Learn more about Missouri turtles from our online *Field Guide* at short.mdc.mo.gov/ZZW.

DEER HUNTERS, PROCESSORS SHARE THE HARVEST

MDC and the Conservation Federation of Missouri (CFM) thank the thousands of Missouri deer hunters who donated 259,414 pounds of venison, including 4,855 whole deer, to the state's Share the Harvest program this past deer season. Thank you also to the more than 100 participating meat processors throughout the state who grind the donated deer meat into ready-to-use packages. The donated deer meat goes to local food banks and food pantries to help feed hungry Missourians all around the state.

Since the program was started in 1992, Share the Harvest has provided more than 4 million pounds of lean, healthy venison.

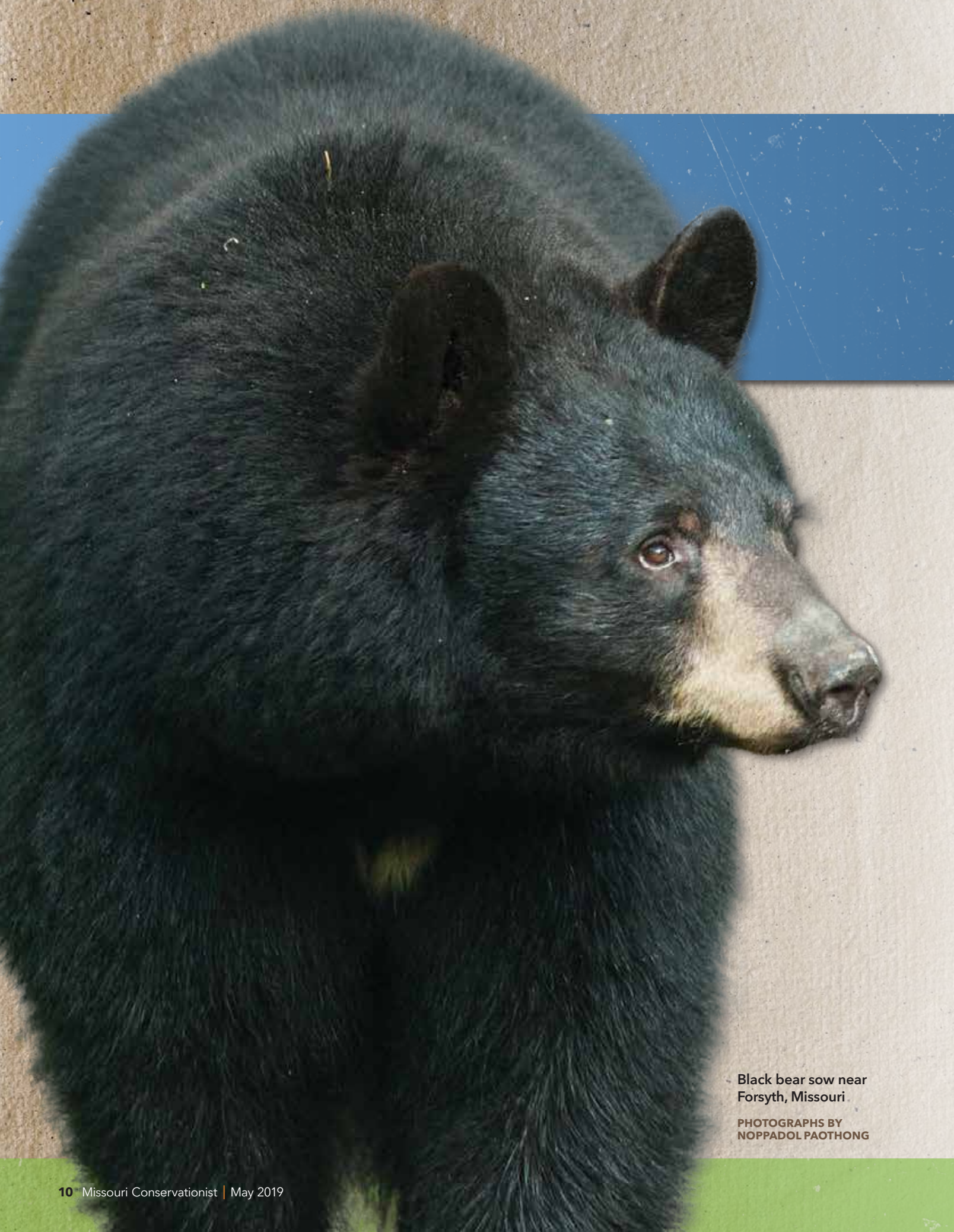
"Hunters started Share the Harvest because they saw a need in their communities, and hunters remain the driving force behind this popular program that helps feed our fellow Missourians who are in need," said MDC Director Sara Parker Pauley. "We sincerely thank the thousands of deer hunters who support Share the Harvest, along with the many participating meat processors and sponsors who help make it possible."

Share the Harvest is coordinated by MDC and CFM. For more information on Share the Harvest, visit short.mdc.mo.gov/Zoz.

WHAT IS IT? PALE PURPLE CONEFLOWER

This perennial native flower will be blooming this month and continue through July. With their tall stature — reaching 3 feet — sunflowerlike, single flower head, and long, drooping petals, pale purple coneflowers (*Echinacea pallida*) are easy to spot. Look for them statewide in prairies, glades, savannas, forests, pastures, roadsides, and railroads.





Black bear sow near
Forsyth, Missouri

PHOTOGRAPHS BY
NOPPADOL PAOTHONG

Make
Way
for

Bears

AS BLACK BEARS MAKE A COMEBACK,
MISSOURIANS ARE LEARNING TO LIVE WITH THEM

by Francis Skalicky

All it took was one dark night and a food-filled freezer on an outside porch to convince Ginny Dubach that bears don't always rely on nature for nourishment.

"He got fried chicken and he got frozen food, too. He wasn't particular," said Dubach of a 2017 incident in which a bear raided a freezer at the side of their cabin near Oldfield in rural Christian County. Ginny's husband, Merrill, said that a package of frozen elk meat was also pilfered by "Clyde."



The Dubachs got creative securing outdoor food sources.

By adding extra latches and a wooden container for their chest freezer, they prevented access to bears and further problems.

The Charm and the Challenge

Yes, the Dubachs had a name for the animal that filched their frozen. Up until Clyde's food search led him from field and stream to freezer, he hadn't ventured near the Dubachs' cabin, but had been seen occasionally in the surrounding area. As the Dubachs discovered, bear sightings in 21st-century Missouri present both charm and challenge. It's all part of living in bear country and being bear aware.

"For many Missourians, they have not had to think about living in 'bear country,' but the fact is, 'bear country' is expanding in our state, and many folks are already living with bears in their counties or have the possibility of having bears living within their counties in the future," said Laura Conlee, an animal resource scientist for MDC and the state's bear biologist.

A Growing Population

At present, Missouri's black bear population is estimated to be between 300–350, most of which are located in the southern part of the state. When the first settlers came to Missouri, the black bear (the only type of bear found in Missouri) ranged across most of the state. As Missouri became settled, the state's black bear population dwindled. Bears were shot for their meat,

for their fur, for the alarm they caused (whether they were harming anything or not), and for the market in bear grease that existed in the U.S. in the early 1800s. By the end of the 19th century, unregulated hunting and habitat destruction had reduced Missouri's bear population to a small number found only in remote parts of the state. By the mid-1900s, it was thought the only place bears could be seen in Missouri was on the state seal.

But the black bear's story in Missouri wasn't finished. From 1958 to the late 1960s, the Arkansas Game and Fish Commission trapped more than 200 bears in Minnesota and Manitoba, Canada. They relocated them to Arkansas to bolster the small population still thought to be roaming the state. This population took hold, and wandering bears from Arkansas soon began appearing in Missouri. It is thought most of the bears seen in Missouri today are the result of Arkansas' reintroduction program, although genetic evidence collected in bear studies in Missouri suggest that a small, remnant population may have held on in this state.

There is no doubt that black bears are part of Missouri's outdoor landscape today.



Tracking Their Presence

Regardless of what their heritage is, there is no doubt that black bears are part of Missouri's outdoor landscape today. Currently, MDC biologists are putting GPS collars on female bears so they can study reproductive success, litter sex ratios, and cub survival during winter denning. GPS collars are also used to monitor home ranges, habitat use, and the impacts of habitat on how the population expands within the state.

Along with this scientific data, there's also plenty of citizen-science information about Missouri's bear population. From 2011 to 2017, MDC received 1,341 bear reports in 87 counties. While these numbers may contain a few misidentifications, biologists feel these reports give further credence to what their research is indicating — that Missouri's bear numbers are growing and the animal's range in the state is expanding.

"At present, bears are most commonly found in forested areas of southern Missouri. In many of our southern counties, bears have been there for a number of years," Conlee said. "But our bear population is expanding and pushing into areas with higher human population densities, where many

folks have had little experience with bears." Missouri bears have been seen in some unlikely places:

- ➔ In 2012, a bear climbed a tree in the middle of the Webster County community of Seymour and remained in the tree all day before climbing down after dark and exiting the community.
- ➔ In 2017, a bear was photographed walking through a neighborhood of Republic in Greene County after dark.
- ➔ In 2018, footage was taken of a bear walking through a residential area of Ballwin, a St. Louis suburb in St. Louis County.



MDC staff check and record measurements and vital signs of an anesthetized bear. Female bears are fitted with GPS collars (above) in the summer months so that dens can be tracked (below) in the winter.



Expect Visitors, but Don't Feed Them

What these types of sightings mean is that a growing number of Missourians face the prospect of either receiving random visits or sharing their living spaces with a large mammal that weighs several hundred pounds, has a large amount of strength and curiosity, and is on a never-ending quest for food.

"A bear's life literally revolves around food, no matter their size or their sex" said MDC Wildlife Damage Biologist Josh Wisdom. "In the spring, it's about eating to get back into shape because they are recovering from denning. Then, for a month or so in the summer, eating provides strength for breeding. After that, it's all about trying to gain weight to go back to sleep in the winter."

It's this ongoing search for sustenance that sometimes lead bears into the 'burbs.

"In a natural setting, a bear would travel miles over land and eat nuts, berries, and so on as it finds them," Wisdom said. "In an urban setting, a bear might only have a 3-mile loop where it

still eats the normal wild foods, but also visits dumpsters, bird feeders, and the like repeatedly. Not only does this condition the bear to keep eating human-supplied foods, but it makes the bear very visible to residents and, along with that, usually creates a little hysteria, as bears are still new to most residents of Missouri."

No Cause for Alarm

This anxiety about bears — which has been fueled by decades of negative publicity from Hollywood — is a fear that is somewhat misguided when it comes to black bears. Wisdom emphasizes that seeing a bear in the woods or one that's merely crossing property usually isn't a cause for alarm.

"For the most part, people should not worry about seeing a bear at all," he said. "Bears are a valuable native species and attacks are extremely rare."

"For example," he continued, "if you see a bear while out hiking or hunting in the woods, consider yourself lucky and enjoy the experience. Make sure the bear sees you, make sure cubs aren't around if it's in the spring or summer, and give the bear plenty of room. Seeing a bear cross a road or out in a pasture is also not cause for alarm, even if cattle are present."

When a bear gets near buildings or homes, the threat to human safety is still low, but concerns for property damage increase. A raided chicken coop, a ripped-up shed, or a destroyed beehive may not cause bodily injury to property owners, but property damage can put pain on their pocketbooks. However, even in a situation that involves property damage, nonlethal harassment techniques coupled with a little preventive maintenance often will cause a bothersome bear to move on.

In the Dubachs' case, Wisdom provided the family with pyrotechnics designed for wildlife dispersal to get rid of Clyde. It was a type of scare cartridge, a nonlethal exploding device that's designed to frighten nuisance wildlife.

"I shot him right in the rear," Merrill said. "It bounced off him and exploded, just like it was supposed to. I haven't seen him since." The Dubachs also bear-proofed their new on-the-porch freezer by encasing it in a wooden box and putting a strong latch secured with a cotter pin on the door.

"We are being pretty careful," Merrill said. "I'm sure there are enough bears around that another situation could get started pretty quick."

Vigilance is important, Conlee said, particularly in areas where bears have either been seen or reported.

"The fact is, bears are part of our natural environment and they will remain part of the Missouri landscape," she said. "It's MDC's responsibility to help educate the public on preventing conflicts with bears, but people that live in bear country may also need to adapt to ensure they aren't providing food for bears and are doing their best to keep them wild."

To put it simply, Conlee said, people need to be bear aware.

"Being bear aware is a proactive approach to preventing and/or reducing human-bear conflicts," she said. It means that you have a general understanding of how to live and be outdoors

Be Bear Aware on the Trail and at Home

As bears make their comeback in Missouri, take a few minutes to browse the guidelines for hiking, camping, and managing your property in ways that keep you safe and bears from becoming a nuisance. Visit short.mdc.mo.gov/Zky.



in bear country. Know what foods attract bears and how you can ensure they don't have access to human-associated foods. Understand what to do if you encounter a bear in your yard or while in the woods. Help educate family, friends, and neighbors about living in bear country."

For the Dubachs, being bear aware is about coexistence.

"It (bear issues) is part of living out here," Merrill said. "They live out here, too. I hope Clyde is still running around," to which Ginny quickly added, "Just not on my porch."

If you see a bear, report it at **mdc.mo.gov/ReportBears**. ▲

Francis Skalicky has been the media specialist for MDC's Southwest Region since Jan. 1, 1996. He lives in Springfield and tries to enjoy the outdoors with his family as often as possible.

Electric fencing excludes nuisance bears. Standard hot wire that's common for cattle operations or premade electric woven wire can be purchased. Having beehives secured to a base can prevent bears from breaking apart the boxes and frames inside (right, top). Ratchet straps or tie downs over trash cans largely prevent access to the human foods inside. While not completely bear-proof when the can is knocked over, the bags don't roll out, making an easy meal for bears (right, bottom).



RODS, REELS, *and* ROLE MODELS



FAMILY OUTDOOR SKILLS CAMP FOR
DEAF AND HARD OF HEARING CHILDREN
OFFERS FAMILIES TIME FOR NETWORKING
WITH NATURE — AND EACH OTHER

by Larry Archer and Darren Haverstick
photographs by Noppadol Paothong





← Luke Abeln tries his luck at the MDC-stocked fish pond.



When it comes to cords of the outdoor type, St. Louis teenager Jordan Ingrham will take a bow string over a fishing line any day.

“She loved archery,” said her father, Bill Ingrham, of his daughter’s first camping experience. “She would miss out on fishing to do the archery because she loved it so much.”

While her preference for archery over angling is nothing unique — there are many who would rather loose an arrow than cast a line — the route she took to know the difference and form that opinion was.

As a child with bilateral significant hearing loss, or deafness, Jordan’s opportunities to learn about and participate in outdoor activities like archery and fishing had been limited. That changed after her father learned about MDC’s Family Outdoor Skills Camp for Deaf and Hard of Hearing Children.



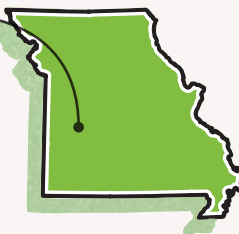
Campers can learn to knap arrowheads or participate in the perennial favorites, archery and shooting



Held at **H. Roe Bartle Scout Reservation in Osceola**, the weekend-long event offers deaf and hard of hearing children and their families the opportunity to learn outdoor skills, including archery, fishing, trap-shooting, pellet-gun shooting, rock-wall climbing, canoeing, kayaking, swimming, trapping, flint-knapping, and crafts, said Tisha Holden, who helps to coordinate the annual event.

"We focus on the deaf and hard of hearing children," Holden said. "We cater to them, and they get to be around other children who are facing the same issues they are."

Camper families arrive at the event Saturday morning for registration and check-in, followed by lunch and an afternoon of activities. Following dinner, evening activities include an



open swim session and movies. After Sunday breakfast, campers are back to the outdoor skills stations, shooting, rowing, climbing, casting, and more until lunch at noon and the return ride home.

A Team Effort

Organizing an event that can sometimes reach as many as 200 participants, including the deaf and hard of hearing participants, parents, and siblings, with more than a dozen activities, meals, and overnight cabin camping is complicated. Adding in the special needs of the participants requires the assistance of volunteers to help with both the skill instruction and communication, Holden said.



First time attendee, Louis Kwok, helps his son, Ethan, hone his fishing skills. The climbing wall is a challenge for kids of all ages.



To put on the event and meet the needs of participants, MDC staff and volunteers coordinate with the Missouri School for the Deaf, Missouri Conservation Agents Association, Boy Scouts of America, United Bowhunters of Missouri, and Compton Traditional Bowhunters.

More Than Outdoor Skills

Beyond learning the new outdoor skills, it has been Jordan's interaction with other children with similar challenges, which began with her first camp when she was 6, that provides the biggest benefit, Ingrham said.

"We were just exuberant," he said. "To have my daughter be able to meet other kids like her from other places and expand her horizons and her group of friends, that was just priceless. My daughter's made friends with people in Kansas City and other places, and it's really pretty cool to show her that there are other kids out there like her."

Not only did she make friends, but Jordan, now 14, also saw role models in the adult staff who volunteer at the camp, he said.

"This gives her an opportunity to really get out there and meet successful, deaf adults, professional interpreters, people who volunteer their time and their resources to help these kids realize that there's somebody out there who cares about them, and there's other people out there like them."

And the benefits do not end with the camp's target audience. In addition to participating in all of the outdoor activities, siblings and parents also benefit from the social interactions the camp allows. Jordan's brother, Jacob, now 11, has been attending the camp with his family since he was 4, Ingrham said.

"My son is hearing, so he's become an interpreter whether he likes it or not — so you want to be fair to him as well — and let him know there are other families out there that are like ours, and we're not different, we're part of something," he said.

And for the parents, the camp provides a network of other parents of children who are deaf or hard of hearing, Holden said.

"The parents really like it for the networking," she said. "They get to see what other families are doing, how they're handling the kids. If there's any issues, problems, they can talk through it. They make good friends."

Frustrating Encounters

Now in its 18th year, the Family Outdoor Skills Camp for Deaf and Hard of Hearing Children is the result of a series of encounters between now-retired Miller County Conservation Agent Dennis Garrison and members of the deaf community.

"I guess with the close proximity to the Missouri School for the Deaf, I started encountering a lot of deaf people in the field,"



"To have my daughter be able to meet other kids like her from other places and expand her horizons and her group of friends, that was just priceless."
—Bill Ingrham

Garrison said.

Frustrated by his limited ability to communicate with members of the deaf community, he sought help from the Missouri School for the Deaf, located in nearby Fulton. It was in those meetings he realized the school's students resided on campus, away from their families, which crystallized for him that any outdoor outreach should focus on children and families.

Within six months of getting the initial approval for the event, Garrison was welcoming deaf and hard of hearing children and their families to his first camp, held in 2002 at Lake of the Ozarks State Park. When he was transferred to St. Clair County in 2004, the event moved with him to the Boy Scout camp in Osceola and has since grown to the point that attendance is now limited to 200 campers, according to Holden.

"At that time, we had maybe 30 people attending," she said of the first events. "Now we have to put a cap on the camp just because the Boy Scout camp doesn't have enough cabin space in the area we use."

The 2019 Family Outdoor Skills Camp for Deaf and Hard of Hearing Children will be July 27-28. There is a \$30 registration fee per family of six and interested families should call or email Holden at 417-532-7904 ext. 6341 or Tisha.Holden@mdc.mo.gov.

A Whirlwind Weekend

The Ingrhams — Bill, his wife, Jodie, Jordan, and Jacob — plan to make the 3½-hour drive to Osceola once again this summer for another "whirlwind weekend," their ninth since that first camp when Jordan was 6.

The travel, the heat of summer, and the long days are a small price to pay when it's all over, he said.

"You go home, and you're not showered, and you're tired, but it's worth it," he said. "Every year is worth it." ▲

Larry Archer is Missouri Conservationist's associate editor and regular contributor of the magazine's monthly Places to Go section. Darren Haverstick, a volunteer at camp, resides near Fair Grove.



STRIPED BASS

at
Bull Shoals Lake

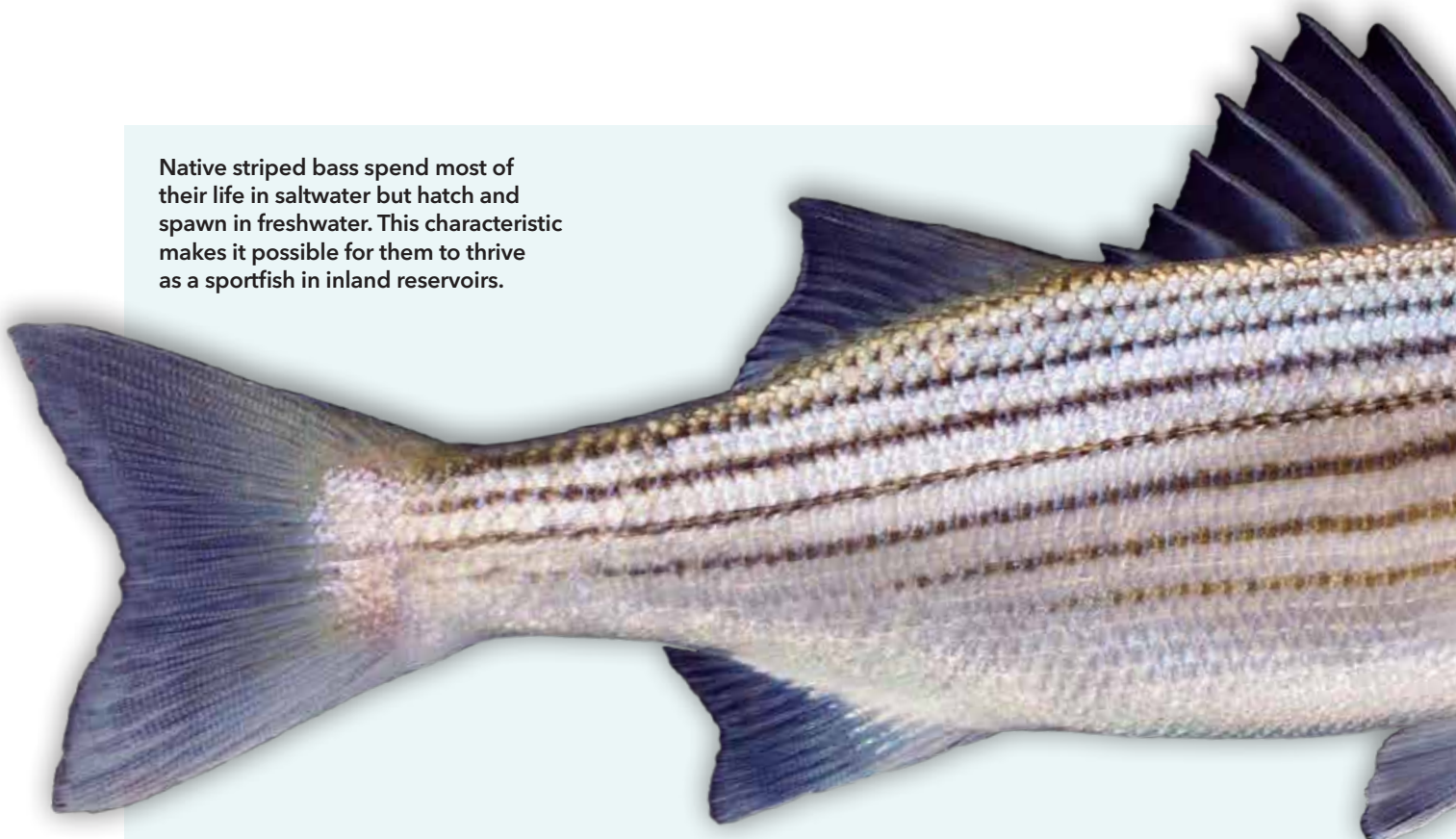
AN ACCIDENTAL STOCKING
LEADS TO OPPORTUNITY

by Francis Skalicky

Jason Crouch
with a beautiful
Bull Shoals
striped bass.



BULL SHOALS LAKE, CLIFFWHITE, JASON CROUCH, WITH STRIPED BASS, COUTTESW, JASON CROUCH



Native striped bass spend most of their life in saltwater but hatch and spawn in freshwater. This characteristic makes it possible for them to thrive as a sportfish in inland reservoirs.



lymouth Colony is best-known as Thanksgiving's birthplace, but it was an interest in fishing, not feasting, that caused an early Massachusetts Bay resident to record these thoughts:

"... the fisherman taking a great cod line to which he fasteneth a peece of lobster and throwes it into the sea. The rockfish biting at it, he pulls her to him and knockes her on the head with a sticke ..."

This 385-year-old description of striped bass fishing in New England shows both spelling and striper-catching techniques have changed since these words were written in 1634. Today's anglers "fasteneth" large swim baits, spoons, and live shad to their lines and, when a striper is reeled in, a dip net is reached for instead of a clubbing "sticke." However, amongst the differences lurk similarities. "Rockfish" is still a nickname used for striped bass in some parts of the country, and any 21st-century angler who's ever reeled in a striper would agree with another entry from this same text describing striped bass as "one of the best fishes in the Country."

Creating a Fishery

This fish's long-standing popularity is at the heart of a six-year research project by MDC and the University of Missouri that will evaluate how to manage striped bass at Bull Shoals Reservoir in southern Missouri. The project, which began in 2018, will provide information to make management decisions on regulations and stocking procedures.

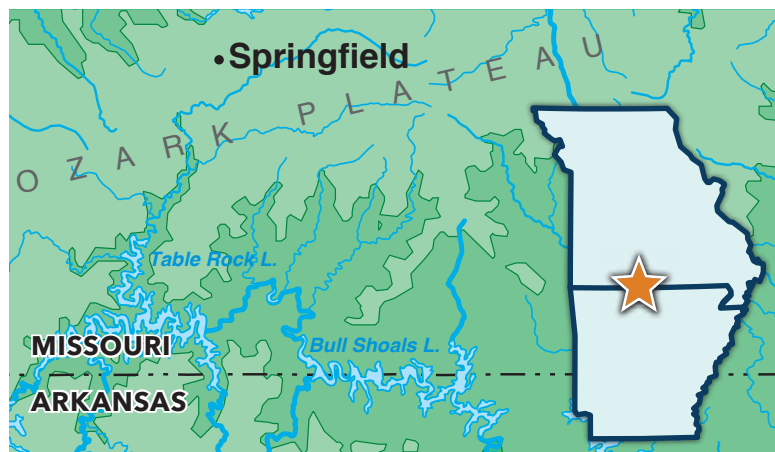
"Creating a striped bass fishery at Bull Shoals will increase the diversity of fishing opportunities for anglers, produce state-record and possibly world-record size fish, and produce up to \$2.4 million in fishing-related revenue annually for the local economy," said MDC Sportfish Ecologist Andy Turner, who is the lead biologist on the project. "Stripers are a hard-fighting and great-tasting fish that occupy a currently unexploited ecological niche in the reservoir. These factors make striped bass an excellent sportfish to add to the Bull Shoals fishery and will improve fishing for many anglers for many years to come."

Nick Avery of Strafford, an angler who enjoys catching striped bass, agreed.

"I enjoy fishing for striped bass because I believe them to be the closest thing to catching a saltwater fish in Missouri," he said. "They are the most exciting and hard-fighting fish you'll find in freshwater."



This striper is well below the state record, but the memories made during this fishing trip will last a lifetime.



Bull Shoals Lake runs along the Missouri-Arkansas state line. The first stocking of striped bass in 1998 produced the current state record and numerous fish over 50 pounds. This led MDC to develop a routine stocking schedule that will provide a sustainable trophy fishery in the reservoir.

Meet the Striped Bass

Striped bass (*Morone saxatilis*) are not native to Missouri or to most of the other states where they are currently found. Their home waters are the Atlantic coast of North America. They are a member of the *Moronidae* family of fish, a group of species commonly referred to as the “true basses.” (Largemouth, smallmouth, and other popular Missouri sportfish that also carry the “bass” name belong to the *Centrarchidae* family, a group of species known as the sunfish family.) Striped bass are anadromous, which means their native habitat is comprised of both fresh and saltwater. They are born in freshwater, spend much of their time in saltwater, and return to freshwater to spawn. In their native coastal habitat, they earned the nickname “rockfish” because they like to nestle in the nooks and crannies of reefs and ledges.

One characteristic of striped bass that has appealed to anglers since the days of the Pilgrims is their size. It’s common for mature adults to weigh between 5 and 20 pounds, but they’ve been known to grow much larger. The International Game Fish Association’s all-tackle land-locked world record, caught in Alabama in 2013, weighed 69 pounds, 6 ounces. The Missouri record is 65 pounds, 2 ounces, caught in 2015 in Bull Shoals.

Striped Bass in Missouri: A History

Striped bass have been part of the Show-Me state’s fishing scene since fry were stocked in Taum Sauk Reservoir in Reynolds County in 1966 and were first stocked in the Lake of the Ozarks in 1967. They were put into Bull Shoals — a 48,000-acre reservoir that straddles the Missouri-Arkansas state line — as a result of an accidental stocking by the Arkansas Game & Fish Commission in 1998. As angler interest around this unplanned stocking grew, MDC realized that accident created opportunity.

“We have recognized the potential that has been created at Bull Shoals from that single, unplanned stocking,” said MDC Fisheries Management Biologist Nathan Recktenwald, who is assisting Turner with the project.

MDC stocked striped bass into Bull Shoals in 2013, 2015, and 2017, which further fueled the angling interest in striper fishing at Bull Shoals and led to the current research project that’s underway.

“We’re creating a fishery at Bull Shoals,” Turner said. “To do that, we have to have population dynamics information.”

Research Project

To get that data, 300–500 striped bass that have acoustic telemetry tags surgically inserted into them will be released into Bull Shoals in five years of the six-year project. This annual stocking group will be composed of 25–50 adult and 100 age-zero (less than a year old) fish. The tags emit a coded sound, which can be tracked with telemetry equipment. Monitoring the tagged fish will provide information about growth rates, survival rates, and the areas of the lake they prefer at various times of the year.

The tags will also provide information about what the striped bass are eating at Bull Shoals and, in so doing, MDC biologists hope to dispel a largely untrue perception that the hunting habits of striped bass take a substantial bite out of a reservoir's sportfish population. While it's true striped bass are opportunistic predators that prey on whatever they can catch, Turner said studies elsewhere have shown the bulk of a striped bass' diet is shad. That's due to the simple fact that there are a lot of large shad around for them to prey on. Young shad are a primary food source for sportfish species, such as black bass and crappie, but their value as a "food fish" disappears when shad become adults. They become too large to be eaten by other species and begin to compete with sportfish species for food and space. Shad have prolific reproduction capabilities and are presumed to be one of the most common and widely distributed fish in the state. Thus, it stands to reason when striped bass — which are large enough to prey on adult shad — are introduced into a reservoir, the primary large fish they go after are adult shad because they are common. This predation on shad benefits the overall fishery by helping to keep fish populations balanced.

"When you introduce striped bass into a reservoir, they fill a niche that is unfilled," Turner said. "They roam in open water and eat shad."

To ensure that this is the case, this research project will also evaluate diet overlap of Striped Bass and other sportfish in the reservoir. The proof will be in the isotope signature from samples of flesh collected from many fish species that live in the reservoir. These samples will provide information on the ratio of carbon and nitrogen that will be contained in fish the tagged striped bass consume. From this information, biologists can determine both the species and the size of fish that are being eaten.

The study is also expected to provide additional data on something MDC fishery biologists already know — Bull Shoals provides excellent habitat for striped bass.

"Striped bass need a thermal refuge during extreme water temperature conditions," Recktenwald said. "Bull Shoals provides the deep-water habitat needed during these stressful conditions, along with cool and well-oxygenated water."

Acoustic telemetry tags emit a coded pulse of sound that is used to locate individual fish in the reservoir for up to four years. A small incision is made in the fish's abdomen, the tag is implanted, and the wound is closed with a few sutures.



PHOTOGRAPHS BY DAVID STONNER



After a short healing period, the tagged fish are stocked into Bull Shoals reservoir and tracked using acoustic telemetry receivers. This allows researchers to estimate survival and identify movement patterns, which is then used to manage the fishery and inform the angling public.



Missouri: A Great Place to Fish

Biologists hope the end result of the research project is to add another layer of variety to Missouri fishing.

"People like to fish for striped bass because of their large size, fighting quality, and good taste," Recktenwald said. "These fish can be elusive and provide a challenge for anglers interested in fishing for a different type of sportfish. Striped bass can be caught in open-water areas and there are not many fish that you can target in deep-water habitats (60 feet or more)."

Avery agreed that fishing for stripers offers unique angling experiences.

"Sometimes striped bass relate to schools of baitfish and sometimes they will relate to structures near baitfish," he said. "Over half the challenge is finding them since they move a lot and can be scattered. But then there are those days you just stumble into them and they are active, and you will load the boat with limits of nice fish."

MDC Fisheries Division biologists hope the current Bull Shoals study will lead anglers to many good striped bass fishing stories.

"The primary reason for this project is to evaluate a newly created fishery so it can be appropriately managed for the angling public," Turner said. "Establishing a new fishery requires an assessment of what the current stocking plan is producing and if there are any negative impacts on other sport-fish populations. Once anglers start catching 30–50 pound fish, it is common for the initial question of 'why stock striped bass?' to change to 'why not stock more striped bass?' This project will provide information to answer both those questions."

MDC Fisheries Division Chief Brian Canaday agrees.

"Missourians want to know that we are being good stewards of the resources they have trusted us to manage," Canaday said. "Conducting this study will allow us to evaluate the stocking of this bonus/trophy fishery in Bull Shoals and will provide information that will shape future fisheries management decisions for this lake. The striped bass fishery is important to Missouri anglers and this region because it provides bonus fishing opportunity for anglers to catch a large and majestic fish like the striped bass here in the Midwest." ▲

Francis Skalicky has been the media specialist for MDC's Southwest Region since 1996. He lives in Springfield and enjoys the outdoors with his family as often as possible.

Get Outside

in MAY → Ways to connect with nature



Baby on Board

Baby deer, also known as **fawns**, are born through June. If you see one while you're out enjoying a Missouri day, leave it alone. The mother is likely nearby and will return to care for it. Leave wildlife wild.



Chicken Hunt

Chicken of the woods mushrooms appear through November. These edible mushrooms start popping up around Mother's Day. Look for orange overlapping clusters on stumps, trunks, and logs of dead or dying trees. (Never eat a mushroom unless you're sure it's edible.)

KANSAS CITY REGION

Blue Springs Get Outdoors Day

Saturday, May 18 • 9 a.m.-3 p.m.

Lake Remembrance

1901 NE Jefferson St., Blue Springs, MO 64014

No registration required. Call 816-228-3766 for more information.

All ages

MDC partners with Blue Springs Parks and Recreation to offer this celebration of the outdoors. Activities include kayaking, fishing, wild edible plants, birding, outdoor yoga, archery, outdoor cooking, and more.



Natural Events to See This Month

Here's what's going on in the natural world.



Young woodchucks leave dens



Jack-in-the-pulpits bloom



White-tailed deer begin growing antlers

LEGENDS OF CONSERVATION PRESENTS: Jay Norwood "Ding" Darling Missouri State Tour

Join us for *The Art of Conservation: A Visit with Ding Darling*, a one-man play that reflects upon the life of the two-time Pulitzer Prize winning editorial cartoonist.

SOUTHEAST REGION Tuesday, May 14 • 7-8 p.m.
Cape Girardeau Conservation Nature Center
2289 County Park Drive, Cape Girardeau, MO 63701

CENTRAL REGION Wednesday, May 15 • 7-8 p.m.
Runge Conservation Nature Center
330 Commerce Drive, Jefferson City, MO 65109

ST. LOUIS REGION Thursday, May 16 • 7-8 p.m.
Powder Valley Conservation Nature Center
11715 Cragwold Road, Kirkwood, MO 63122

SOUTHWEST REGION Friday, May 17 • 7-8 p.m.
Springfield Conservation Nature Center
4601 Nature Center Way, Springfield, MO 65804

KANSAS CITY REGION Saturday, May 18 • 11a.m.-12 p.m.
Anita B. Gorman Conservation Discovery Center
4750 Troost Ave., Kansas City, MO 64110

Leaving the Nest

Young **bald eagles** begin to fledge. Scope out the nearest eagles' nests and see if you can catch a glimpse of these novice flyers.

A composite image featuring a man in a blue vest and cap fishing with a rod and reel, and a large catfish jumping out of the water with its mouth open. The text "ENJOY MORE TIME HERE" is overlaid in large, yellow, block letters.

ENJOY MORE TIME HERE

Ever have a lost or forgotten permit spoil your outdoor plans? Not anymore. MDC's permits system lets you buy online, print your permit at home, and have it in hand immediately. You can even reprint the permit if you lose or damage it.

Buy your permits online at
mdc.mo.gov/permits

The logo for the Missouri Conservation Department, featuring a triangle with a landscape scene and the text "CONSERVATION DEPARTMENT MISSOURI".

Serving nature and you®

Places to Go

SOUTHEAST REGION

Duck Creek Conservation Area

Fishing destination doubles as waterfowl birding haven

by Larry Archer

✳ As one of MDC's 15 intensively managed wetlands, Duck Creek Conservation Area (CA) attracts waterfowl hunters during the season, but after the season ends, the area draws anglers, birders, and nature watchers.

"We have an 18,000-acre fishing lake, and it's known in the state as one of the best for pan fishing, so it's got a lot of blue gill and crappie in it," said Duck Creek CA Manager Nicky Walker.

Because the 6,318-acre area, located southwest of Joplin, draws waterfowl throughout the spring, it is also a birding destination, Walker said.

"As we go into late April and early May, we have a pretty good population of wood ducks and hooded mergansers that nest on site," she said.

The beneficiary of nearly \$4 million worth of wetland restoration, Duck Creek CA has seen a resurgence of several species of conservation concern, she said.

"Those aren't things we've introduced. Those are things that just came back naturally with the renovations," she said.

Visitors can also find the geological curiosity known as mima mounds, a series of raised mounds whose origins are unknown.

"There's a lot of stories, but there's no actual, 'This is what a mima mound is,'" she said.

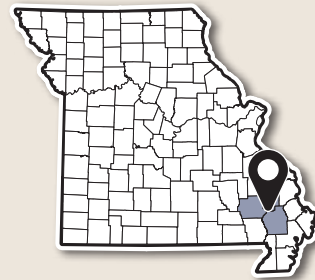


Halloween pennant dragonfly

"This all used to be bottomland hardwood forest — and we have less than 2 percent of bottomland hardwood forest left — so coming here is a really unique experience to see those trees and that woodland habitat."

—Duck Creek CA Manager
Nicky Walker

NORRADOI PAOTHOONG





DUCK CREEK CONSERVATION AREA

consists of 6,318 acres in Bollinger, Stoddard, and Wayne counties. From Puxico, take Highway 51 north 9 miles to the main entrance.

N37° 2' 43.08" | W90° 4' 23.52"

short.mdc.mo.gov/ZNo 573-222-3337

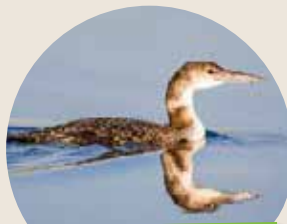
WHAT TO DO WHEN YOU VISIT

-  **Bird-Watching** Included on the Great Missouri Birding Trail (short.mdc.mo.gov/Zqe) and in the National Audubon Society's Mingo Basin Important Bird Area (short.mdc.mo.gov/Zqn). The eBird list of birds recorded at Duck Creek CA is available at short.mdc.mo.gov/Zqh.
-  **Camping** Two designated camping areas with fire pads, picnic tables, and privies
-  **Fishing** Black bass, white bass, catfish, blue gill, crappie, and sunfish
-  **Hiking** No designated trails, but much of the area is accessible by gravel roads and levees
-  **Dog Training & Field Trials** Special-use permit required
-  **Hunting Deer and turkey** Deer and turkey regulations are subject to annual changes. Please refer to the *Spring Turkey* and *Fall Deer and Turkey* booklets for current regulations. Also **dove, rabbit, and squirrel**
-  **Trapping** Special use permit required.
-  **Waterfowl Hunting** Morning draw. Waterfowl regulations are subject to annual change, so refer to the *Waterfowl Hunting Digest* for current regulations.

WHAT TO LOOK FOR WHEN YOU VISIT



Swamp rabbit



Common loon



Spotted salamander



American white pelican



Northern Parula

Setophaga americana

Status

Common summer resident

Size

Length: 4½ inches

Distribution

Statewide



Did You Know?

This bird species is often killed in collisions with communication towers and other structures during migration. Habitat loss and diminishing nesting territories are also affecting their numbers in some areas.

Northern parulas enjoy forested areas, often along small streams and large rivers. Their key characteristics include blue-gray feathers, a greenish-yellow patch on their back, and two white bars on their wings. Males have a two-colored dark band across their yellow chest. The parula has two songs: a buzzy ascending trill with a sharp note at the end: *bzzzzzz-ZIP* and an ascending buzzy trill with pauses.



LIFE CYCLE

Present in Missouri from April through early October, northern parula warblers build their cup-shaped nests high in the treetops. They can have two to seven eggs, which incubate in 12 to 14 days. Their young leave the nest 10 to 11 days after hatching. A northern parula warbler can live to be at least 5 years old. They winter in Central America and the West Indies.



FOODS

Often hanging upside down like chickadees, northern parula warblers forage for insects and spiders among leaves, branches, and dead leaf clusters in trees.



ECOSYSTEM CONNECTIONS

It takes international cooperation to care for migratory birds like the northern parula warbler. Migratory birds play important roles in all the habitats and regions they pass through. We must protect all the ecosystems they require, whether it is the breeding territory, wintering grounds, or the stopover places in between.

Outdoor Calendar

❖ MISSOURI DEPARTMENT OF CONSERVATION ❖



FISHING

Black Bass

Impounded waters and non-Ozark streams:
Open all year

Most streams south of the Missouri River:
May 25, 2019–Feb. 29, 2020

Bullfrogs, Green Frogs

June 30 at sunset–Oct. 31, 2019

Nongame Fish Giggling

Impounded Waters, sunrise to sunset:
Feb. 1–Sept. 14, 2019

Streams and Impounded Waters,
sunrise to midnight:
Sept. 15, 2019–Jan. 31, 2020

Paddlefish

Statewide:
March 15–April 30, 2019

On the Mississippi River:
March 15–May 15, 2019
Sept. 15–Dec. 15, 2019

Trout Parks

Catch-and-Keep:
March 1–Oct. 31, 2019
Catch-and-Release:
Nov. 8, 2019–Feb. 10, 2020

Buy Permits and Permit Card

Buy Missouri hunting and fishing permits from numerous vendors around the state, online at mdc.mo.gov/buypermits, or through our free mobile apps, MO Hunting and MO Fishing. Permit cards are an additional way to show proof of most permits. Buy a new permit card for a one-time fee of \$2 at mdc.mo.gov/buypermits. Buyers can select from four images: bass, buck, bluebird, or mallard duck.



HUNTING

Bullfrogs, Green Frogs

June 30 at sunset–Oct. 31, 2019

Coyote

Restrictions apply during April, spring turkey season, and firearms deer season.

Open all year

Crow

Nov. 1, 2019–March 3, 2020

Deer

Archery:

Sept. 15–Nov. 15, 2019
Nov. 27, 2019–Jan. 15, 2020

Firearms:

- ▶ Early Youth Portion (ages 6–15):
Nov. 2–3, 2019
- ▶ November Portion:
Nov. 16–26, 2019
- ▶ Late Youth Portion (ages 6–15):
Nov. 29–Dec. 1, 2019
- ▶ Antlerless Portion (open areas only):
Dec. 6–8, 2019
- ▶ Alternative Methods Portion:
Dec. 28, 2019–Jan. 7, 2020

Groundhog (woodchuck)

May 6–Dec. 15, 2019

Pheasant

Youth (ages 6–15):
Oct. 26–27, 2019

Regular:

Nov. 1, 2019–Jan. 15, 2020

Quail

Youth (ages 6–15):
Oct. 26–27, 2019

Regular:

Nov. 1, 2019–Jan. 15, 2020

Rabbit

Oct. 1, 2019–Feb. 15, 2020

Squirrel

May 25, 2019–Feb. 15, 2020

Turkey

Archery:

Sept. 15–Nov. 15, 2019
Nov. 27, 2019–Jan. 15, 2020

Firearms:

- ▶ Spring: April 15–May 5, 2019
- ▶ Fall: Oct. 1–31, 2019

Waterfowl

See the Waterfowl Hunting Digest or visit
short.mdc.mo.gov/ZZx for more information.



Free MO Hunting and MO Fishing Apps

MO Hunting makes it easy to buy permits, electronically notch them, and Telecheck your harvest. MO Fishing lets you buy permits, find great places to fish, and ID your catch. Get both in Android or iPhone platforms at short.mdc.mo.gov/Zi2.

For complete information about seasons, limits, methods, and restrictions, consult the *Wildlife Code of Missouri* at short.mdc.mo.gov/Zib. Current hunting, trapping, and fishing regulation booklets are available from local permit vendors or online at short.mdc.mo.gov/ZZf.



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Bird nesting peaks at the end of May. Take a hike and train your eyes on the forest canopy where birds, like this American robin, are doting on their nesting young. What birds will you discover? For help with identification, check out our *Field Guide* at short.mdc.mo.gov/ZZW.

📷 by **Noppadol Paothong**

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